

AMENDMENT TO CLAIMS

1 Please add claims 11-16 as follows:

- 1 1. (Original) A method for breaking a task into work granules to assign to processes, the  
2 method comprising the steps of:  
3 determining how many processes will be used to execute said task;  
4 determining how many granules to divide said task into based on  
5 how many processes will be used to execute said task, and  
6 a range defined by a first threshold and a second threshold;  
7 wherein the first threshold is a minimum number of work granules to assign to each  
8 of the processes that will be used to execute said task;  
9 wherein the second threshold is a maximum number of work granules to assign to  
10 each of the processes that will be used to execute said task; and  
11 dividing said task into a number of work granules that allows each process that will  
12 be used to execute said task to be assigned a number of work granules that  
13 falls within said range.
- 1 2. (Original) The method of Claim 1 wherein:  
2 the step of determining how many granules to divide said task into includes the step  
3 of determining a work quantity to equally assign to work granules of said task;  
4 and  
5 the step of dividing said task into a number of work granules includes dividing said  
6 task into work granules that substantially reflect said work quantity.
- 1 3. (Original) The method of Claim 2, wherein the step of determining a work quantity  
2 includes determining a work quantity that represents an amount of data to access from  
3 a database table.
- 1 4. (Original) The method of Claim 1, wherein said task entails scanning data that is  
2 stored as contiguous sets of data blocks, wherein the method further includes the step  
3 of adjusting work assigned to a work granule so that any contiguous set of data blocks

scanned by said work granule during execution of the work granule is scanned completely during said execution of the work granule.

5. (Original) The method of Claim 2, wherein each work granule is associated with one or more ranges of ranges of blocks to scan from a database table, said range corresponding to the work quantity assigned to said work granule.

6. (Original) A computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 1.

7. (Original) A computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 2.

8. (Original) A computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 3.

9. (Original) A computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 4.

10. (Original) A computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 5.

11. (New) A computer-readable medium carrying one or more sequences of one or more instructions for managing the assignment of a plurality of work granules to a plurality of processes on a plurality of nodes, the one or more sequences of one or more instructions including instructions which, when executed by one or more processors, cause the one or more processors to perform the steps of:  
making a determination that:

7 a portion of a first work granule of said plurality of work granules has an  
 8 affinity to a particular node of said plurality of nodes, and  
 9 another portion of said first work granule has an affinity to another node of  
 10 said plurality of nodes;  
 11 based on said determination, generating first data that establishes said first  
 12 work granule as having an affinity to a particular node of said plurality  
 13 of nodes;  
 14 assigning each work granule from the plurality of work granules to a process from  
 15 said plurality of processes based on said first data;  
 16 wherein a portion of each work granule of said plurality of work granules has an  
 17 affinity for a given node of said plurality of nodes when the portion of said  
 18 each work granule can be executed more efficiently by said given node  
 19 relative to another node of said plurality of nodes; and  
 20 wherein the step of generating first data includes  
 21 generating second data that establishes as not having an affinity for any  
 22 particular node of said plurality of nodes a second work granule that  
 23 includes  
 24 a portion of work which has an affinity for a node from said plurality  
 25 of nodes, and  
 26 another portion of work which has an affinity for another node from  
 27 said plurality of nodes.

- 1 12. (New) The computer-readable medium of claim 11, wherein the step of generating
- 2 second data includes:
- 3 adding said first work granule to a first list that includes work granules established as
- 4 having an affinity for said particular node; and

adding said second work granule to a second list that includes work granules  
established as having no affinity for any particular node from said plurality of  
nodes.

13. (New) A computer-readable medium carrying one or more sequences of one or more  
instructions for managing the assignment of a plurality of work granules to a plurality  
of processes on a plurality of nodes, the one or more sequences of one or more  
instructions including instructions which, when executed by one or more processors,  
cause the one or more processors to perform the steps of:  
making a determination that:  
a portion of a first work granule of said plurality of work granules has an  
affinity to a particular node of said plurality of nodes, and  
another portion of said first work granule has an affinity to another node of  
said plurality of nodes;  
based on said determination, generating first data that establishes said first  
work granule as having an affinity to a particular node of said plurality  
of nodes;  
assigning each work granule from the plurality of work granules to a process from  
said plurality of processes based on said first data;  
wherein a portion of each work granule of said plurality of work granules has an  
affinity for a given node of said plurality of nodes when the portion of said  
each work granule can be executed more efficiently by said given node  
relative to another node of said plurality of nodes; and  
wherein the step of generating first data includes generating first data that establishes  
as having an affinity to a particular node from said plurality of nodes a

particular work granule that specifies a plurality of database table partitions to scan.

14. (New) A computer-readable medium carrying one or more sequences of one or more instructions for managing the assignment of a plurality of work granules to a plurality of processes on a plurality of nodes, the one or more sequences of one or more instructions including instructions which, when executed by one or more processors, cause the one or more processors to perform the steps of:  
making a determination that:  
a portion of a first work granule of said plurality of work granules has an affinity to a particular node of said plurality of nodes, and  
another portion of said first work granule has an affinity to another node of said plurality of nodes;  
based on said determination, generating first data that establishes said first work granule as having an affinity to a particular node of said plurality of nodes;  
assigning each work granule from the plurality of work granules to a process from said plurality of processes based on said first data;  
wherein a portion of each work granule of said plurality of work granules has an affinity for a given node of said plurality of nodes when the portion of said each work granule can be executed more efficiently by said given node relative to another node of said plurality of nodes;  
determining that a quantity of certain data is accessed during execution of said first work granule;  
determining that a majority of said quantity of said certain data resides at a location local to said first node; and

24 wherein the step of establishing said first work granule as having an affinity to said  
25 particular node is performed in response to determining that a majority of said  
26 quantity of third data resides at a location local to said first node.

- 1 15. (New) A computer-readable medium carrying one or more sequences of one or more  
2 instructions for assigning work granules to a plurality of processes on a plurality of  
3 nodes, the one or more sequences of one or more instructions including instructions  
4 which, when executed by one or more processors, cause the one or more processors to  
5 perform the steps of:  
6 dividing a task into a plurality of work granules that includes  
7 a first set of work granules that each define work by specifying one or more  
8 ranges of blocks to scan, and  
9 a second set of work granules that each define work by specifying at least two  
10 database table partitions of a database table to scan;  
11 generating first data that specifies, for each work granule of said plurality of work  
12 granules, whether said each work granule has an affinity for a particular node  
13 of said plurality of nodes;  
14 assigning said plurality of work granules to said plurality of processes based on said  
15 first data;  
16 wherein said database table is partitioned into said at least two database table  
17 partitions by values in one or more columns of said database table; and  
18 wherein the step of generating first data includes generating for each of said first set  
19 and said second set:  
20 at least one list that includes work granules having an affinity for a particular  
21 node from said plurality of nodes; and

22                   another list that includes work granules having no particular affinity for a  
23                   particular node.

1    16.   (New) The computer-readable medium of Claim 15, wherein the step of assigning  
2           said plurality of work granules includes assigning to a first process on a first node  
3           from said plurality of nodes:  
4           a work granule from said at least one list when said at least one list includes work  
5           granules that have an affinity for said first node and at least one work granule  
6           has not been assigned to a process; and  
7           a work granule from said another list when said at least one list includes no work  
8           granule that has not been assigned to a process.

The Examiner is invited to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

Respectfully submitted,

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